We claim:-

1. A multimetal oxide material of the stoichiometry I

$$Mo_1V_aM^1_bM^2_cM^3_dO_n \qquad (I),$$

where

M^1 is at least one of the elements from the group consisting of Te and Sb;

M^2 is at least one of the elements from the group consisting of Nb, Ti, W, Ta and Ce;

M^3 is at least one of the elements from the group consisting of Pb, Ni, Co, Bi, Pd, Ag, Pt, Cu, Au, Ga, Zn, Sn, In, Re, Ir, Sm, Sc, Y, Pr, Nd and Tb;

a is from 0.01 to 1;

b is from > 0 to 1,

c is from > 0 to 1,

d is from > 0 to 0.5 and

n is a number which is determined by the valency and frequency of the elements other than oxygen in (I),

whose X-ray diffraction pattern has reflections h, i and k whose peaks are at the diffraction angles (2Θ) 22.2 ± 0.5° (h), 27.3 ± 0.5° (i) and 28.2 ± 0.5° (k),

- the reflection h being the one with the strongest intensity within the X-ray diffraction pattern and having a full width at half height (FWHH) of not more than 0.5°,
- the intensity P_i of the reflection i and the intensity P_k of the reflection k fulfilling the relationship $0.65 \leq R \leq 0.85$, where R is the intensity ratio defined by the formula

$$R = P_i / (P_i + P_k)$$

and

- the FWHH of the reflection i and of the reflection k is in each case ≤ 1°,

wherein the at least one multimetal oxide material (I) is one whose X-ray diffraction pattern has no reflections with a peak position 2Θ = 50.0 ± 0.3°.

2. A multimetal oxide material as claimed in claim 1, wherein $0.67 \leq R \leq 0.75$.

3. A multimetal oxide material as claimed in claim 1, wherein $0.69 \leq R \leq 0.75$.

4. A multimetal oxide material as claimed in claim 1, wherein $0.71 \leq R \leq 0.74$.

5. A multimetal oxide material as claimed in claim 1, wherein R = 0.72.

6. A multimetal oxide material as claimed in any of claims 1 to 5, wherein its specific surface area is from 11 to 40 m^2/g.

7. A multimetal oxide material as claimed in any of claims 1 to 6, wherein its X-ray diffraction pattern also has further reflections with their peak positions at the following diffraction angles 2Θ:

9.0 ± 0.4° (l),
6.7 ± 0.4° (o) and
7.9 ± 0.4° (p).

8. A multimetal oxide material as claimed in claim 7, wherein its X-ray diffraction pattern also has further reflections with their peak positions at the following diffraction angles 2Θ:

45.2 ± 0.4° (q)
29.2 ± 0.4° (m) and
35.4 ± 0.4° (n).

9. A multimetal oxide material as claimed in claim 8, wherein, on the same intensity scale, the reflections h, i, l, m, n, o, p and q have the following intensities:

h = 100,
i = from 5 to 95,
l = from 1 to 30,
m = from 1 to 40,
n = from 1 to 40,
o = from 1 to 30,
p = from 1 to 30 and
q = from 5 to 60.

10. A multimetal oxide material as claimed in any of claims 1 to 9, wherein a is from 0.05 to 0.6.

11. A multimetal oxide material as claimed in any of claims 1 to 10, wherein b is from 0.01 to 1.

12. A multimetal oxide material as claimed in any of claims 1 to 11, wherein c is from 0.01 to 1.

13. A multimetal oxide material as claimed in any of claims 1 to 12, wherein d is from 0.0005 to 0.5.

14. A multimetal oxide material as claimed in any of claims 1 to 13, wherein

a = is from 0.1 to 0.6;
b = is from 0.1 to 0.5;
c = is from 0.1 to 0.5 and
d = is from 0.001 to 0.5.

15. A multimetal oxide material as claimed in any of claims 1 to 14, wherein M^2 comprises at least 50 mol%, based on its total weight, of Nb.

16. A multimetal oxide material as claimed in any of claims 1 to 14, wherein M^2 comprises at least 75 mol%, based on its total weight, of Nb.

17. A multimetal oxide material as claimed in any of claims 1 to 14, wherein M^2 is exclusively Nb.

18. A multimetal oxide material as claimed in any of claims 1 to 17, wherein M^3 is at least one element from the group consisting of Ni, Co, Bi, Pd, Ag, Au, Pb and Ga.

19. A multimetal oxide material as claimed in any of claims 1 to 17, wherein M^3 is at least one element from the group consisting of Ni, Co, Pd and Bi.

20. A multimetal oxide material as claimed in any of claims 1 to 17, wherein M^1 is Te, M^2 is Nb and M^3 is at least one element from the group consisting of Ni, Co and Pd.

21. A multimetal oxide material which contains at least one multimetal oxide material as claimed in any of claims 1 to 20 and whose X-ray diffraction pattern has no reflection with the peak position $2\Theta = 50.0 \pm 0.3°$.

22. A multimetal oxide material as claimed in claims 21, in which the multimetal oxide material (I) is present in a form diluted with at least one finely divided material from the group consisting of silica, titanium dioxide, alumina, zirconium oxide and niobium oxide.

23. A multimetal oxide material which comprises ≥ 80% by weight of at least one multimetal oxide material as claimed in any of claims 1 to 20 and whose X-ray diffraction pattern has a reflection with the peak position $2\Theta = 50.0 \pm 0.3°$.

24. A process for the heterogeneously catalyzed partial gas-phase ammoxidation of at least one saturated or unsaturated hydrocarbon, wherein the catalytically active material used is at least one multimetal oxide material as claimed in any of claims 1 to 23.

25. A process as claimed in claim 24, wherein the hydrocarbon is propane, propene or a mixture of propane and propene.

26. A process for the heterogeneously catalyzed partial gas-phase ammoxidation of at least one saturated or unsaturated hydrocarbon, wherein the catalytically active material used is at least one multimetal oxide material as claimed in any of claims 1 to 23.

27. A process as claimed in claim 26, wherein the hydrocarbon is propane, propene or a mixture of propane and propene.

28. The use of at least one multimetal oxide material as claimed in any of claims 1 to 23 as a catalyst for a heterogeneously catalyzed partial oxidation and/or ammoxidation of at least one saturated and/or unsaturated hydrocarbon.

29. A process for the preparation of a multimetal oxide material as claimed in any of claims 1 to 20, wherein a thorough dry mixture is produced from sources of the elemental constituents of multimetal oxide material, said mixture is calcined at from 350 to 700°C and the resulting product is washed with an aqueous solution of an organic and/or inorganic acid.